We Claim:

1.   A method of selectively establishing read-only access to a volume of a storage-device, the method comprising:

receiving an input/output request packet (IRP) that is traversing a stack of device objects representing a storage-device;

determining the type of access being requested via the IRP; and

selectively failing the IRP depending upon the requested-type of access.

2.   The method of claim 1, wherein the selectively failing step fails the IRP if the requested-type of access is something other than read-only access.

3.   The method of claim 1, the method further comprising:

checking whether the IRP is of a type meriting scrutiny; and

skipping the determining and selectively-failing steps if the IRP does not merit scrutiny.

4.   The method of claim 3, wherein:

the checking step inspects whether the IRP includes the major function code IRP_MJ_CREATE; and

the skipping step skips if the IRP does not include IRP_MJ_CREATE.

5.   The method of claim 1, wherein

the IRP includes one or more access fields representing the type of access to the volume being requested; and

the determining step includes

checking the one or more access fields for contents indicating that the type of access being requested is something other than read-only access.

6.   The method of claim 5, wherein:

the checking step makes a logical combination of one or more bit values in the one or more access fields; and

the failing step fails the IRP if the result of the logical combination indicates something other than read-only access.

7. A method of selectively restricting access to a volume of a storage-device, the method comprising:

receiving a first input/output request packet (IRP) that is traversing a stack of device objects representing a storage-device;

determining the type of access being requested via the first IRP; and

selectively failing the first IRP according to a volume-ID identified found in the IRP and the type of access requested by the IRP.

8. The method of claim 7, wherein:

the IRP is a first IRP; and

the method further comprises:

ascertaining whether the volume-ID for the particular volume on the storage-device which the stack represents has been obtained;

generating and sending, if the volume-ID has not been obtained, a second IRP representing a request to obtain the volume-ID; and

receiving, in response to the second IRP, the volume-ID.

9. The method of claim 7, wherein the selectively failing step does the following:

checks the desired read-state of the volume based on the volume-ID, and

fails the IRP if the desired read-state is read-only and the requested access is something other than read-only access.

10. The method of claim 9, wherein the selectively failing step checks by comparing the volume-ID to a list of volume-IDs that are constrained to read-only access.

11. The method of claim 7, the method further comprising:

checking whether the IRP is of a type meriting scrutiny; and

skipping the determining and selectively-failing steps if the IRP does not merit scrutiny.

12.   The method of claim 11, wherein:

the checking step inspects whether the IRP includes the major function code IRP_MJ_CREATE; and

the skipping step skips if the IRP does not include IRP_MJ_CREATE.

13.   The method of claim 7, wherein

the IRP includes one or more access fields representing a type of access to the volume being requested; and

the determining step includes

inspecting the one or more access fields for contents indicating that the type of access being requested is something other than read-only access.

14.   The method of claim 13, wherein:

the inspecting step makes a logical combination of one or more bit values in the one or more access fields.

15.   The method of claim 7, wherein

the first IRP is received at a location in the stack represented by a device object; and

the ascertaining step checks one or more bits in an unreserved area of the device object to ascertain whether the volume-ID has been obtained.

16.   The method of claim 7, wherein the volume-ID is the volume label.

17.   A method of selectively establishing read-only access to a volume of a storage-device, the method comprising:

receiving an input/output request packet (IRP) that is traversing a stack of device objects representing a storage-device;

determining whether the received IRP is a set-status IRP for setting an operational status of a filter to be one of ON or OFF; and

setting, if the IRP is a set-status IRP, the operational status of the filter according to the set-status IRP.

18.   The method of claim 17, wherein the determining step includes inspecting one or more bits in an unreserved area of the IRP to ascertain if the IRP is a set-status IRP.

19.   The method of claim 17, the method further comprising:

checking whether the IRP is of a type meriting scrutiny; and

skipping the determining and setting steps if the IRP does not merit scrutiny.

20.   The method of claim 19, wherein:

the checking step inspects whether the IRP includes the major function code IRP_MJ_CREATE; and

the skipping step skips if the IRP does not include IRP_MJ_CREATE.

21.   The method of claim 17, wherein the filter examines an IRP for at least one of the following criteria: a type of access to the volume which the received IRP represents; and a volume-ID for the particular volume of the storage-device which the stack represents.

22.   The method of claim 17, wherein the setting step sets the operational status by toggling the operational status.

23. The method of claim 17, wherein the setting step sets the operational status to be that of a desired operational status identified in the IRP.

24.   A machine-readable medium including instructions execution of which by a machine selectively establishes read-only access to a volume of a storage-device, the machine-readable instructions comprising:

a code segment for receiving an input/output request packet (IRP) that is traversing a stack of device objects representing a storage-device;

a code segment for determining the type of access being requested via the IRP; and

a code segment for selectively failing the IRP depending upon the requested-type of access.

25.   An apparatus for selectively establishing read-only access to a volume of a storage-device, the apparatus comprising:

a memory in which is created the stack of device objects representing a storage-device, the stack including a filter device object (DO);

filter driver means for

assessing the type of access being requested via an input/output request packet (IRP) arriving at the filter DO, and

selectively failing the IRP according to the requested-type of access.

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